

10-23-02 13:55

ID=613 232 8440

P. 01

DT05 Rec'd PCT/PTO 23 OCT 2002

## SMART & BIGGAR

Intellectual Property & Technology Law

To Fax No.: 703 746-9195

Page 1 of: 4

Attention: OFFICE OF INITIAL  
PATENT EXAMINATION  
FILING RECEIPT  
CORRECTIONS

P.O. Box 2999, Station D  
55 Metcalfe Street, Suite 900  
Ottawa, Canada K1P 5Y6

Tel.: (613) 232-2486  
Fax: (613) 232-8440

From: Angela Armstrong-Baker

Your file No.:

Date: October 23, 2002

Reply to Ottawa file no.: 74618-18

Time:

RECEIVED

NOV 05 2002

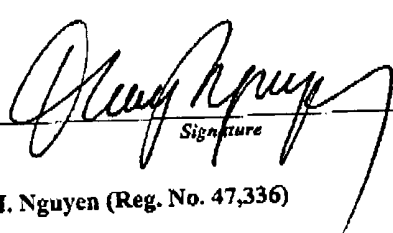
TECH CENTER 1600/2900

If there are any transmission problems, please call (613) 232-2486.

Original copy and any enclosures ☐ will be sent by ☐ mail  
☒ will not ☐ courier

The information contained in this transmission is confidential and only for the intended recipient identified above. If you are not the intended recipient, you are hereby notified that any dissemination or use of this communication is unlawful. If you have received this transmission in error, please immediately notify us by telephone (collect). Return the original message to us and retain no copy.

Received from <613 232 8440> at 10/23/02 2:53:11 PM [Eastern Daylight Time]

<b>TRANSMITTAL LETTER</b> (General - Patent Pending)			Docket No. 74618-18 /ala	
In Re Application Of: JUDY E. ANDERSON				
Serial No. 09/936,609	Filing Date 03/10/00	Examiner	Group Art Unit 1653	
Title: NITRIC OXIDE MANIPULATION OF MUSCLE SATELLITE CELL ACTIVATION				
<p style="text-align: center;"><u>TO THE ASSISTANT COMMISSIONER FOR PATENTS:</u></p> <p>Transmitted herewith is: <u>REQUEST FOR CORRECTED FILING RECEIPT</u></p> <p>Applicant respectfully requests that the Filing Receipt be corrected to identify the of invention as: "NITRIC OXIDE MANIPULATION OF MUSCLE SATELLITE CELL ACTIVATION"</p> <p>Enclosed is a copy of the Filing Receipt with the change noted thereon, together with the first page of the specification, as filed, with the title noted thereon.</p> <p>in the above identified application.</p> <p><input type="checkbox"/> No additional fee is required.</p> <p><input type="checkbox"/> A check in the amount of _____ is attached.</p> <p><input checked="" type="checkbox"/> The Assistant Commissioner is hereby authorized to charge and credit Deposit Account No. 19-2550 as described below. A duplicate copy of this sheet is enclosed.</p> <p><input type="checkbox"/> Charge the amount of _____</p> <p><input checked="" type="checkbox"/> Credit any overpayment.</p> <p><input checked="" type="checkbox"/> Charge any additional fee required.</p> <p style="text-align: right;">Dated: October 23, 2002</p> <div style="display: flex; justify-content: space-between;"><div> Signature Thuy H. Nguyen (Reg. No. 47,336)  SMART &amp; BIGGAR P.O. Box 2999, Station D 900-55 Metcalfe Street Ottawa, Ontario Canada, K1P 5Y6  Tel.: (613) 232-2486 CC:</div><div style="border: 1px solid black; padding: 5px; width: 300px;"><p>I certify that this document and fee is being deposited on _____ with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.</p><p>_____ Signature of Person Mailing Correspondence</p><p>_____ Typed or Printed Name of Person Mailing Correspondence</p></div></div>				



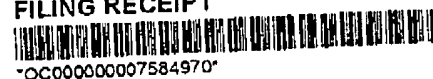
## UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	PL FEE REC'D	ATTY DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/936.609	01/07/2002	1653	723	74618-18/PW	24	32	6

CONFIRMATION NO. 7301

## FILING RECEIPT



\*OC00000007584970\*

07380  
SMART & BIGGAR  
P.O. BOX 2999, STATION D  
55 METCALFE STREET, SUITE 900  
OTTAWA, ON K1P5Y6  
CANADA

Date Mailed: 03/06/2002

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Judy E. Anderson, Winnipeg, CANADA;

## Domestic Priority data as claimed by applicant

THIS APPLICATION IS A 371 OF PCT/CA00/00255 03/10/2000  
WHICH CLAIMS BENEFIT OF 60/123,895 03/11/1999

## Foreign Applications

Projected Publication Date: Not Applicable, filed prior to November 29, 2000

Non-Publication Request: No

Early Publication Request: No

\*\* SMALL ENTITY \*\*

## Title

Modulation of skeletal muscle precursor cell activation  
Nitric Oxide manipulation of muscle

Preliminary Class

Satellite Cell Activation  
435

74618-16

1

## S P E C I F I C A T I O N

## NITRIC OXIDE MANIPULATION OF MUSCLE SATELLITE CELL ACTIVATION

5

## FIELD OF INVENTION

The present invention relates generally to skeletal muscle proliferation. More specifically, the invention relates to nitric oxide as a modulator of skeletal muscle precursor cell activation, and to uses of nitric oxide to improve muscle formation and repair in normal and disease states.

## BACKGROUND OF THE INVENTION

Skeletal muscle arises after the induction of the mesoderm. After differentiation of the mesoderm into dorsal, intermediate, and lateral mesoderm, the dorsal mesodermal mesenchyme differentiates to form myotomes which, in turn, differentiate to give rise to the myogenic precursor cells which ultimately form skeletal muscle. Unlike the myogenic precursor cells of the heart, the skeletal muscle precursors fuse side-to-side to form unbranched, multinucleated myofibers. Some of the skeletal myogenic precursor cells do not differentiate and fuse into myocytes (also called myofibers) but, rather, attach to the outside of the plasmalemma of the myocytes. These cells participate in muscle growth during maturation and typically thereafter will remain, throughout adulthood, as largely undifferentiated, quiescent skeletal muscle "satellite cells." Upon injury of a skeletal muscle, these satellite cells are revealed to be myogenic precursor cells, or muscle "stem cells," which proliferate and differentiate, again by fusion, into new and functional skeletal muscle. Even after injury, some of the proliferated satellite cells remain undifferentiated and attach to the newly